Model Exams on Concept 3.2

Model Exam 1

1 Choose the correct answer:

1. Putting data on a weather map represents .... for weather prediction.
   a. gathering data b. collecting data
   c. analyzing data d. putting it all together
2. If the temperature at the top of a mountain is 18 °C, the temperature at its bottom might be ....
   a. 18 °C b. 0 °C c. 10 °C d. 25 °C
3. .... looks like a solid wall of debris and dust traveling along the horizon.
   a. A flood b. A sandstorm c. A drought d. A tsunami
4. A/An .... is used to measure the speed of a tornado's winds.
   a. barometer b. thermometer c. satellite d. anemometer

2 Put (✓) or (✗):

1. Meteorologists can be completely sure of future weather conditions. (   )
2. The desert is characterized by a hot and rainy climate. (   )
3. During climbing a mountain, the reading of the barometer increases. (   )
4. In general, ecosystems can recover from flooding. (   )

3 Answer the following questions:

1. Write the scientific term:
   It is an area on the dry side of a mountain range where rainfall is reduced. (....................)
2. Give a reason for:
   The number of weather disasters are expected to increase in the future.

   ....

Model Exam 2

1 Choose the correct answer:

1. All the following are innovative ways that are used by farmers in the desert, except ....
   a. reusing water b. using wind turbines
   c. building dams d. using solar energy
2. The horizontal movement of air along the Earth's surface is called the ....
   a. air current b. atmosphere c. wind d. air pressure
3. The sudden melting of snow and ice over a region causes ....
   a. earthquakes b. droughts c. hurricanes d. floods
4. A/An .... is used to measure the current atmospheric pressure.
   a. barometer b. thermometer c. satellite d. anemometer

2 Put (✓) or (✗):

1. Meteorologists collect data about the weather conditions after analyzing them. (   )
2. A clear sky can turn cloudy and rainy throughout the day. (   )
3. A rain gauge can be used to predict precipitation for the coming days. (   )
4. Wind is created due to the equal heating of the Earth's surface by the Sun. (   )

3 Answer the following questions:

1. Write the scientific term:
   They are scientists who study and predict the weather.
   (..........................)
2. What happens if:
   You hold a paper spiral over a lighted lamp?
   ....

Model Exam 3

1 Choose the correct answer:

1. Applying what meteorologists know about the effects of different landforms on weather is called ....
   a. mapping data b. analyzing data
   c. collecting data d. putting it all together
2. .... is the measure of the amount of water vapor in the air.
   a. Precipitation b. Humidity
   c. Temperature d. Atmospheric pressure
3. .... may cause the drowning of people and livestock.
   a. Sandstorms b. Droughts c. Floods d. Wildfires
4. A/An .... can be used to compare the amount of precipitation in two different regions.
   a. barometer b. weather radar c. rain gauge d. anemometer

2 Put (✓) or (✗):

1. Wind is created when less dense air replaces more dense air. (   )
2. When warm, moist air rises, it forms clouds. (   )
3. An anemometer can be used to track thunderstorms and hurricanes. (   )
4. A weather satellite can predict the possible path of a hurricane. (   )

3 Answer the following questions:

1. Write the scientific term:
   It is the lack of available water for growing crops, farming animals, and industry. (....................)
2. Give a reason for:
   The sand on the beach is hotter than the sea water during the day.
   ....

Model Exam 4

1 Choose the correct answer:

1. Clouds are formed when .... air is ....
   a. dry - cooled
   b. humid - heated
   c. dry - heated
   d. humid - cooled
2. All the following are considered weather disasters, except ....
   a. droughts
   b. precipitations
   c. floods
   d. sandstorms
3. The temperature may reach more than 30 degrees in Aswan tomorrow. This reflects the ....
   a. humidity
   b. air pressure
   c. weather
   d. climate
4. Meteorologist uses a/an .... to measure the air temperature.
   a. barometer
   b. thermometer
   c. satellite
   d. anemometer

2 Put (✓) or (✗):

1. Water and land on Earth usually have the same temperature. ( )
2. Wind is generated when cold air replaces warm air. ( )
3. Ice crystals form if the air in the cloud is cold enough. ( )
4. A frozen ground can absorb the water when flooding occurs. ( )

3 Answer the following questions:

1. Write the scientific term:

   It is the weight of the air column above a location. (....................)
2. What happens if:

   The dust of a sandstorm fills the irrigation canals?

   ....

Model Exam 5

1 Choose the correct answer:

1. A .... is formed when a mountain range blocks the .... coming from a nearby ocean.
   a. sandstorm - dry air b. sandstorm - humid air
   c. rain shadow - humid air d. rain shadow - dry air
2. A .... can carry weather measurement tools and also transmit weather data.
   a. barometer b. weather station
   c. thermometer d. satellite
3. .... pulls the heavy water droplets in clouds downward.
   a. Wind b. Gravity c. Humidity d. Sunlight
4. Sandstorms are most common in ....
   a. polar regions b. deserts c. rainforests d. green landscapes

2 Put (✓) or (✗):

1. In deserts, the amount of water that evaporates is less than that falls by precipitation. (   )
2. The solar radiation has a different effect on water and land on Earth's surface. (   )
3. A tornado's wind direction is measured by an anemometer. (   )
4. Droughts and floods have no harmful effects.

3 Answer the following questions:

1. Write the scientific term:
   It is the overflow of water on the land around riverbanks due to the increase in the rainfall flowing on the river. (....................)
2. Give a reason for:
   Sandstorms can be hazardous to motorists or car drivers.

   ....

Model Exams on Concept 4.1

Model Exam 1

1 Choose the correct answer:

1. The .... may be found in the same habitat of lizards.
   a. emperor penguin
   b. Arctic fox
   c. poison dart frog
   d. Dorcas gazelle
2. All the following are examples of physical adaptation, except ....
   a. the fur color
   b. bird's migration
   c. the fatty layer
   d. the thorns on a stem
3. All the following lifestyles (habits) make our bodies healthy, except ....
   a. a proper nutrition
   b. smoking
   c. avoiding drinking soda
   d. exercising
4. Some of the desert plants are small and wiry (herbal) to .... water.
   a. store
   b. absorb
   c. lose
   d. not lose

2 Put (✓) or (✗):

1. Chrysanthemum produces flowers when the day is longer than the night. (   )
2. The genetic traits are passed down from the offspring to the parents. (   )
3. The emperor penguin has thick fur to keep its body warm. (   )
4. Unlike life choices, people do not have the ability to control the environmental factors. (   )

3 Answer the following questions:

1. Write the scientific term:
   They are external (outside) factors that influence the growth of living organisms. (....................)
2. Give a reason for:
   There is no Sphynx cat with long hair like a Birman.
   ....

Model Exam 2

1 Choose the correct answer:

1. Baby rabbits look like their parents as a result of the ....
   a. environmental factors b. genetic factors
   c. lifestyle d. good habits
2. All the following plants grow in the Western Desert in Egypt, except ....
   a. palms b. Opuntia c. pine trees d. acacia trees
3. Both Birman cats and Sphynx cats are similar in ....
   a. their hairless body b. being wild cats
   c. being from the Felis catus d. their hair length
4. All the following are migratory birds, except ....
   a. falcons b. flamingos c. eagles d. penguins

2 Put (✓) or (✗):

1. "Animals living in a herd" is an example of behavioral adaptation. (   )
2. All deserts on Earth have a dry and hot climate. (   )
3. Light is one of the biotic factors that affect the growth of plants. (   )
4. In the Arctic, caribou hunt wolves that feed on grass. (   )

3 Answer the following questions:

1. Write the scientific term:
   It is a behavioral adaptation in which birds move together from one place to another, usually seasonally. (....................)
2. Give a reason for:
   The African penguin has a circle of skin without feathers surrounding its eyes.
   ....

Model Exam 3

1 Choose the correct answer:

1. Hot deserts are characterized by the presence of all the following, except ....
   a. temporary ponds b. little groundwater
   c. moderate climate d. little rainfall
2. The kittens of Sphynx cats inherit their .... from their parents.
   a. silky hair b. hairless bodies c. hair color d. fur color
3. The .... is from the challenges that face migratory birds in their journey.
   a. availability of water b. size of the habitat
   c. moderate weather d. limited resting sites
4. The Arctic fox is an example of a/an ....
   a. large ecosystem b. abiotic factor
   c. environmental factor d. biotic factor

2 Put (✓) or (✗):

1. Birds migrate to areas with extreme climates. (   )
2. The colorful poison skin of the poison dart frog helps it stay safe. (   )
3. All living organisms inherit their traits from their offspring. (   )
4. The growth of a plant toward light is a behavioral adaptation. (   )

3 Answer the following questions:

1. Write the scientific term:
   It is a desert biome that has a cold climate all year.
   (..............................)
2. What happens to:
   The plants in an ecosystem if they receive too intense light?
   ....

Model Exam 4

1 Choose the correct answer:

1. Desert plants usually have .... to keep animals away.

   a. small leaves b. thick stems c. herbal shapes d. prickles

2. .... are not adapted to the extreme cold weather.

   a. Caribou b. Arctic foxes c. African penguins d. Wolves

3. The growth of a child will be affected by ....

   a. the lifestyle choices b. the environmental factors
   c. the genetic factors d. all the previous answers

4. All the following are among the abiotic factors in Arctic ecosystems, except ....

   a. light b. trees c. water d. air

2 Put (✓) or (✗):

1. Migratory birds never return to their homelands. (   )
2. Genes are tiny structures found in the cell nucleus. (   )
3. Acacia trees and Dorcas gazelles live in the same habitat. (   )
4. Sphynx cats and Birman cats are different in their hair length. (   )

3 Answer the following questions:

1. Write the scientific term:

   It is an area that contains biotic and abiotic factors that interact with each other. (....................)

2. Give a reason for:

   Falcons and eagles migrate to Egypt in winter.

   ....

Model Exam 5

1 Choose the correct answer:

1. .... live in tropical rainforests.
   a. Caribou
   b. Dorcas gazelles
   c. Emperor penguins
   d. Poison dart frogs
2. A healthy environment is characterized by the presence of ....
   a. polluted water b. no sanitation c. diseases d. health care
3. Desert plants usually have thick stems or leaves to ....
   a. lose water b. store water c. absorb water d. gain water
4. The characteristics that you get from your parents are called ....
   a. inherited traits
   b. environmental factors
   c. lifestyle choices
   d. acquired traits

2 Put (✓) or (✗):

1. The Western Desert in Egypt is an important stopover for migratory birds. (   )
2. Deserts may be hot areas or cold areas. (   )
3. The Arctic fox has white fur to warm its body. (   )
4. Your lifestyle choices affect your health and growth. (   )

3 Answer the following questions:

1. Write the scientific term:

   It is a process through which a living organism is able to live and survive in its environment. (....................)

2. Give a reason for:

   Some desert plants have short, extended roots near the Earth's surface.

   ....

Answers

Model Exams on Concept 3.2

Model Exam 1

1 1 c 2 d 3 b 4 d

2 1 ✗ 2 ✗ 3 ✗ 4 ✓

3
1. Rain shadow
2. Due to the global climate change.

Model Exam 2

1 1 c 2 c 3 d 4 a

2 1 ✗ 2 ✓ 3 ✗ 4 ✓

3
1. Meteorologists
2. The paper spiral will move without stopping.

Model Exam 3

1 1 d 2 b 3 c 4 c

2 1 ✗ 2 ✓ 3 ✗ 4 ✓

3
1. Drought
2. Because the sand heats up faster than the water.

Model Exam 4

1 1 d 2 b 3 c 4 b

2 1 ✗ 2 ✓ 3 ✓ 4 ✗

3
1. Air pressure (Atmospheric pressure)
2. It will affect the water quality in the irrigation canals.

Model Exam 5

1 1 c 2 d 3 b 4 b

2 1 ✗ 2 ✓ 3 ✗ 4 ✗

3
1. Flooding
2. Because sandstorms reduce the visibility of motorists, causing a lot of accidents.

Model Exams on Concept 4.1

Model Exam 1

1
1. d
2. b
3. b
4. d

2
1. ✗
2. ✗
3. ✗
4. ✓

3
1. Environmental factors
2. Because the Sphynx does not have the same genetic factors for long hair as those found in the Birman.

Model Exam 2

1
1. b
2. c
3. c
4. d

2
1. ✓
2. ✗
3. ✗
4. ✗

3
1. Bird migration
2. To cool its body fast.

Model Exam 3

1
1. c
2. b
3. d
4. d

2
1. ✗
2. ✓
3. ✗
4. ✓

3
1. Antarctica
2. The intense light may damage the plant parts and dry or burn them.

Model Exam 4

1
1. d
2. c
3. d
4. b

2
1. ✗
2. ✓
3. ✓
4. ✓

3
1. An ecosystem
2. Due to the moderate winter climate in Egypt.

Model Exam 5

1
1. d
2. d
3. b
4. a

2
1. ✗
2. ✓
3. ✗
4. ✓

3
1. Adaptation
2. To draw (absorb) any available water from the upper layer of the soil.

Model (1)

15 Marks

1 Choose the correct answer:

1. At the top of the mountains, the atmospheric pressure is ....

   a) high b) low c) fixed d) reduced

2. If the temperature at the top of the mountain is 5°C, so the temperature at the bottom of the mountain could be .... °C.

   a) 0 b) 3 c) -5 d) 15

3. The barometer is used to measure ....

   a) air temperature b) atmospheric pressure
   c) wind speed d) humidity

4. Steppe eagles migrate to search for all of the following, except ....

   a) best conditions for reproduction b) find other food resources
   c) extreme weather conditions d) suitable habitat

2 Complete the following sentences using words between brackets:

1. The air density at the top of the mountain is .... than the air density at the bottom of the mountain. (more – less)
2. Behind the mountain, that side is .... (dry – humid)
3. The Emperor penguin's body is covered with .... (dense feathers – dense fur)
4. Migrant falcons have .... adaptations that help them migrate for millions of miles. (physical – behavioral)

3 Answer the following questions:

1. Give reason. During summer, we can't stand barefoot on the sand.

   - ....

2. What happens if the bodies of desert lizards are covered with bright colored scales?

   - ....

Model (2)

15 Marks

1 Choose the correct answer:

1. .... detects the intensity and speed of precipitation and tracks of thunderstorms and hurricanes.

   a) Weather radar b) Barometer c) Thermometer d) Anemometer

2. The horizontal movement of air is ...., while the vertical movement is ....

   a) air current – wind
   b) wind - air current
   c) atmospheric pressure – air current
   d) wind - atmospheric pressure

3. The most weather phenomena occur at .... layer of atmosphere.

   a) troposphere b) mesosphere c) thermosphere d) stratosphere

4. .... is an environmental factor that affects increasing the number of different animals species.

   a) The animal's body size
   b) The animal's age
   c) The habitat size
   d) The plant length

2 Put (✓) or (✗):

1. Density of air doesn't change by heating. ( )
2. Rain gauge measures the amount of rain in a certain area. ( )
3. Most of the animals that live in polar regions have dark and light fur. ( )
4. Thick stem in desert plants is one of their structural adaptations. ( )

3 Answer the following questions

1. What happens when sand and dust accumulate on solar panels after a sand storm?

   - ....

2. List the factors that may affect the plant during photosynthesis.

   - ....

Model (3)

15 Marks

1 Choose the correct answer:

1. Increasing the amount of rain on an area that can't hold the water may cause ....
   a) drought b) floods c) sand storm d) rain shadow
2. Heat transfers through .... by convection.
   a) gases and liquids b) liquids and solids c) solids and gases d) gases only
3. During a sunny day on the beach, ...
   a) the temperature of both water and land increases by the same rate
   b) the temperature of both water and land decreases by the same rate
   c) the temperature of land increases faster than the temperature of water
   d) the temperature of land decreases slower than the temperature of water
4. Dorcas deer .... as a behavioral adaptation to survive in the desert habitat.
   a) doesn't drink water for several months b) has brown fur
   c) has long legs d) has dense feathers

2 Write the scientific term:

1. It is the science of studying and predicting weather.
   (Meteorology)
2. It is the measurement of how water vapor is present in the air.
   (Humidity)
3. An area that contains biotic (living) and abiotic (non-living) factors that interact together.
   (Ecosystem)
4. The process that helps living organisms to survive in the environment in which they live.
   (Adaptation)

3 Answer the following questions:

1. Give reason. Floods also have some advantages.
   - ....
2. What happens when a plant doesn't receive enough light in its environment?
   - ....

Model (4)

15 Marks

1 Choose the correct answer:

1. All of the following are from the ways farmers in the desert use to improve the soil, except ....

   a) reusing water
   b) use wind turbines
   c) use high-fertility and water crops
   d) use solar energy

2. The density of cold air is .... the density of hot humid air.

   a) more than
   b) less than
   c) equal to
   d) constant to

3. Which of the following is an example of physical adaptation?

   a) Bird migration to reproduce.
   b) Animals sleep during winter.
   c) Bull shark countershading.
   d) Butterfly migration for warm places.

4. Dorcas deer .... as a structural adaptation to survive in the desert habitat.

   a) doesn't drink water for several months
   b) has brown scales
   c) long tail
   d) has short legs

2 Complete the following sentences using words between brackets:

1. Extreme hot temperatures may cause .... (sand storms – drought)
2. Air .... by cooling. (contracts – expands)
3. Changing the color of polar animals to white in winter is a .... adaptation. (structural – behavioral)
4. .... lives along the coasts of south Africa. (Emperor penguin – African penguin)

3 Answer the following questions:

1. What happens to the temperature of the sea water at night?

   - ....

2. Most of desert plants have short extended roots near the Earth's surface. (Give a reason).

   - ....

Model (5)

15 Marks

1 Complete the following sentences using words between brackets:

1. .... measures the wind speed. (Anemometer – Barometer)
2. Sea water absorbs heat slowly and loses it .... (slowly – quickly)
3. Dust storms .... the quality of water in irrigation canals. (increase – decrease)
4. Antarctica is a .... ecosystem. (small – large)

2 Put (✓) or (✗):

1. Sand storms decrease visibility during driving. ( )
2. Convection occurs due to the similarity in density and temperature. ( )
3. Availability of food is one of the factors that faces elephants, so they migrate to other regions. ( )
4. Environmental factors do not affect the survival of organisms in their ecosystems. ( )

3 Answer the following questions:

1. What happens when we move down the mountain? (Regarding the air density)

   - ....

2. Give a reason. Poison dart frog has colorful poisonous skin.

   - ....

Model (1)

15 Marks

1 Choose the correct answer:

1. At the top of the mountains, the atmospheric pressure is ....

a) high b) low c) fixed d) reduced

2. If the temperature at the top of the mountain is 5°C, so the temperature at the bottom of the mountain could be .... °C.

a) 0 b) 3 c) -5 d) 15

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a) air temperature b) atmospheric pressure

c) wind speed d) humidity

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2 Complete the following sentences using words between brackets:

1. The air density at the top of the mountain is .... than the air density at the bottom of the mountain. (more – less)

2. Behind the mountain, that side is .... (dry – humid)

3. The Emperor penguin's body is covered with .... (dense feathers – dense fur)

4. Migrant falcons have .... adaptations that help them migrate for millions of miles. (physical – behavioral)

3 Answer the following questions:

1. Give reason. During summer, we can't stand barefoot on the sand.

- Because sand absorbs heat quickly and becomes very hot.

2. What happens if the bodies of desert lizards are covered with bright colored scales?

- It will not be able to hide among rocks in the desert and be seen easily by other predators.

Model (2)

15 Marks

1 Choose the correct answer:

1. .... detects the intensity and speed of precipitation and tracks of thunderstorms and hurricanes.

   a) Weather radar b) Barometer c) Thermometer d) Anemometer

2. The horizontal movement of air is ...., while the vertical movement is ....

   a) air current – wind b) wind - air current

   c) atmospheric pressure – air current d) wind - atmospheric pressure

3. The most weather phenomena occur at .... layer of atmosphere.

   a) troposphere b) mesosphere c) thermosphere d) stratosphere

4. .... is an environmental factor that affects increasing the number of different animals species.

   a) The animal's body size b) The animal's age

   c) The habitat size d) The plant length

2 Put (✓) or (✗):

1. Density of air doesn't change by heating. (✗)
2. Rain gauge measures the amount of rain in a certain area. (✓)
3. Most of the animals that live in polar regions have dark and light fur. (✗)
4. Thick stem in desert plants is one of their structural adaptations. (✓)

3 Answer the following questions

1. What happens when sand and dust accumulate on solar panels after a sand storm?

   - Solar panels stop generating electrical energy.

2. List the factors that may affect the plant during photosynthesis.

   - Availability of water, light intensity and light duration.

Model (3)

15 Marks

1 Choose the correct answer:

1. Increasing the amount of rain on an area that can't hold the water may cause ....

   a) drought b) floods c) sand storm d) rain shadow

2. Heat transfers through .... by convection.

   a) gases and liquids b) liquids and solids c) solids and gases d) gases only

3. During a sunny day on the beach, ...

   a) the temperature of both water and land increases by the same rate

   b) the temperature of both water and land decreases by the same rate

   c) the temperature of land increases faster than the temperature of water

   d) the temperature of land decreases slower than the temperature of water

4. Dorcas deer .... as a behavioral adaptation to survive in the desert habitat.

   a) doesn't drink water for several months b) has brown fur

   c) has long legs d) has dense feathers

2 Write the scientific term:

1. It is the science of studying and predicting weather.

   (Meteorology)

2. It is the measurement of how water vapor is present in the air.

   (Humidity)

3. An area that contains biotic (living) and abiotic (non-living) factors that interact together.

   (Ecosystem)

4. The process that helps living organisms to survive in the environment in which they live.

   (Adaptation)

3 Answer the following questions:

1. Give reason. Floods also have some advantages.

   - Because some ecosystems like River Nile depends on the periodic floods.

2. What happens when a plant doesn't receive enough light in its environment?

   - The plant can't make photosynthesis so it will die and other living organisms will be affected by the decrease in the amount of food they eat.

Model (4)

15 Marks

1 Choose the correct answer:

1. All of the following are from the ways farmers in the desert use to improve the soil, except ....

   a) reusing water
   b) use wind turbines
   c) use high-fertility and water crops
   d) use solar energy

2. The density of cold air is .... the density of hot humid air.

   a) more than
   b) less than
   c) equal to
   d) constant to

3. Which of the following is an example of physical adaptation?

   a) Bird migration to reproduce.
   b) Animals sleep during winter.
   c) Bull shark countershading.
   d) Butterfly migration for warm places.

4. Dorcas deer .... as a structural adaptation to survive in the desert habitat.

   a) doesn't drink water for several months
   b) has brown scales
   c) long tail
   d) has short legs

2 Complete the following sentences using words between brackets:

1. Extreme hot temperatures may cause .... (sand storms – drought)
2. Air .... by cooling. (contracts – expands)
3. Changing the color of polar animals to white in winter is a .... adaptation. (structural – behavioral)
4. .... lives along the coasts of south Africa. (Emperor penguin – African penguin)

3 Answer the following questions:

1. What happens to the temperature of the sea water at night?

   - It will decrease.

2. Most of desert plants have short extended roots near the Earth's surface. (Give a reason).

   - To draw (absorb) any available water.

Model (5)

15 Marks

1 Complete the following sentences using words between brackets:

1. .... measures the wind speed. (Anemometer – Barometer)
2. Sea water absorbs heat slowly and loses it .... (slowly – quickly)
3. Dust storms .... the quality of water in irrigation canals. (increase – decrease)
4. Antarctica is a .... ecosystem. (small – large)

2 Put (✓) or (✗):

1. Sand storms decrease visibility during driving. (✓)
2. Convection occurs due to the similarity in density and temperature. (✗)
3. Availability of food is one of the factors that faces elephants, so they migrate to other regions. (✓)
4. Environmental factors do not affect the survival of organisms in their ecosystems. (✗)

3 Answer the following questions:

1. What happens when we move down the mountain? (Regarding the air density)

   - The air density increases.

2. Give a reason. Poison dart frog has colorful poisonous skin.

   - To hide from enemies and protect itself.

Self-Assessments
on Concept (3.2)

Self-Assessment 5 On Lesson 1

1 **(A) Choose the correct answer :**

1. In different biomes, the least amount of rain falls on .... biomes.
   a. rainforest b. grassland c. savanna d. desert
2. Clouds are formed as a result of .... of water vapor.
   a. condensation b. evaporation c. freezing d. melting
3. Coastal mountain ranges often have two sides which are .... side and .... side.
   a. narrow – wide b. wet – dry c. high – low d. dark – light

(B) Give a reason for :

Farmers have to use new ways to irrigate crops in desert, such as reusing water.

....

2 **(A) Put (✓) or (✗) :**

1. A meteorologist is a scientist who studies the rocks of Earth. (   )
2. The cold air is heavier than the hot air. (   )
3. Farmers may have to reuse water to deal with the problem of water shortage, especially in desert lands. (   )

(B) What happens if ...?

Rain falls on deserts in suitable quantities.

....

3 **The following diagram shows the steps of rain shadow phenomenon, complete the following steps using the words below :**

(rises – descends – cools – warms – condenses)

Humid air blows against a mountain.

↓

Air (.....1......) , then it (.....2......)

↓

Air (.....3......) , then precipitation occurs

↓

Air (.....4......) , then it (.....5......)

↓

Air dries the land

Self-Assessment 6 till Lesson 2

1 (A) Write the scientific term of each of the following :

1. A force that the atmospheric air exerts on a certain area of the Earth's surface. (..................)
2. It is the measure of how much water vapor is present in the air. (..................)
3. A type of balloon that contains measuring instruments and that is sent into the air to find out information about weather. (..................)

(B) Give a reason for :

Barometers are important in predicting weather.

....

2 (A) Put (✓) or (✗) :

1. Meteorologists can be completely sure of future weather conditions. ( )
2. The temperature at the top of a mountain is less than the temperature at the bottom of this mountain. ( )
3. The weight of the air above a certain area is known as the atmospheric pressure. ( )

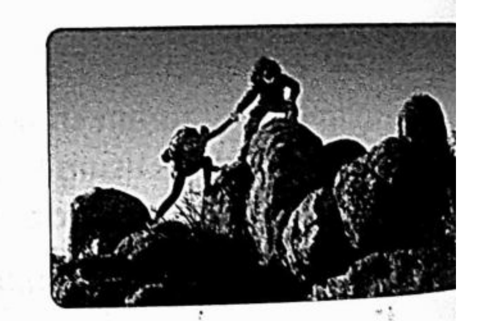
(B) What happens to ...?

Air density as we move up toward the top of a mountain.

....

3 Maged and Ramy went on a mountain climbing trip together, they took a small barometer and heavy clothes in their trip.

Look at this photo, then complete the sentences below using the words in brackets :



(temperature – pressure – density)

1. They used barometer in measuring atmospheric ....
2. They took heavy clothes because the air .... decreased as they moved upward during climbing.
3. It is more difficult to them to breath at the top of mountain because the air .... decreased as they went up.

Self-Assessment 7 till Lesson 3

1 (A) Correct the underlined words :

1. The amount of water vapor in the atmosphere represents air density. (.....................)
2. Anemometer is used to measure the rain speed. (.....................)
3. The least amount of rain falls on rainforest biome. (.....................)

(B) Give a reason for :

When air is cooled, it contracts.

....

2 (A) Put (✓) or (✗) :

1. Rain gauge is used to measure the amount of rain. ( )
2. By decreasing the temperature of air, its density decreases. ( )
3. The temperatures of both water and sand increase at different rates when they are exposed to the same amount of heat. ( )

(B) What happens to ... ?

Small water droplets in a cloud when they become bigger and heavier.

....

3 Choose from column (B) what suits it in column (A) :

(A)	(B)
1.	a. It is used to measure the air temperature.
2.	b. It is used to measure the amount of rain.
	c. It is used to measure the atmospheric pressure.
3.	d. It is used to measure the wind speed.

1. .... 2. .... 3. ....

Self-Assessment 8 till Lesson 4

1 (A) Correct the underlined words :

1. Floods may occur as a result of gentle rain. (..........)
2. Sandstorms blow up from a wet area such as desert. (..........)
3. The force the atmospheric air exerts on a certain area of the Earth's surface is known as gravity. (..........)

(B) Give a reason for :

Driving in a sandstorm could be dangerous.

....

2 (A) Put (✓) or (X) :

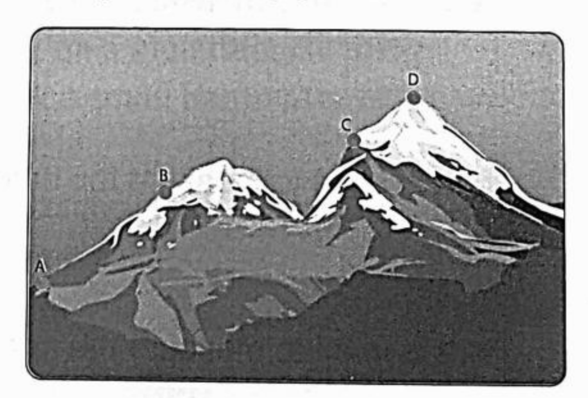
1. Floods have both harms and benefits. ( )
2. The too much precipitation may cause drought. ( )
3. Barometers are used to measure the speed of wind. ( )

(B) What happens to ...?

An irrigation canal when a dust storm fills up it with dust.

....

3 Look at this picture, then put (✓) or (X) :



1. The temperature at point (D) is higher than the temperature at point (B). ( )
2. The density of air at point (A) equals the density of air at point (C). ( )
3. The atmospheric pressure at point (D) is less than the atmospheric pressure at points (A) , (B) and (C). ( )

Self-Assessments
on Concept (4.1)

Self-Assessment 9 On Lesson 1

1 **(A) Choose the correct answer :**

1. Thick fur of animals which live in cold areas, is an adaptation that looks like the ....
   a. presence of thorns on a plant stem. b. growth of plants toward the light.
   c. migration of birds to search for food. d. behavioral adaptations.
2. An animal to live and survive, needs ....
   a. habitat only. b. water only.
   c. habitat and food only. d. water, food and habitat.
3. All the following are genetic factors that affect living organisms, except ....
   a. size of animal. b. body color of animal.
   c. length of plant. d. size of habitat.

(B) Cross out the odd word :

Size of cat – Availability of water – Body color of gazelle – Length of herbs.

(.....................)

---

2 **(A) Put (✓) or (✗) :**

1. The more the ability of animal to adapt to the environment, the more the chance to survive. ( )
2. Flowering plants are usually shorter than herbs. ( )
3. Small animals are completely different from their parents. ( )

(B) What happens if ...?

The climate in the Red Sea becomes very cold to the migratory birds.

....

....

---

3 **Complete the following sentences using these words :**

(habitat – environmental – genetic – migration)

1. Transferring of falcons and steppe eagles to Egypt in winter, is known as ....
2. The place where animals adapted and live, is known as ....
3. The growth and survival of living organisms are affected by .... factors and .... factors.

Self-Assessment 10 till Lesson 2

1 (A) Choose the correct answer :

1. Brown spots on young rabbit's fur is related to a ....
   a. environmental factor. b. genetic factor.
   c. climate factor. d. abiotic factor.
2. All the following are biotic factors in an ecosystem, except .... which is abiotic factor.
   a. insect b. grass c. light d. living organism
3. Palm trees, emperor penguin are ....
   a. abiotic factors present in the same habitat.
   b. abiotic factors present in different habitats.
   c. biotic factors live in the same habitat.
   d. biotic factors live in different habitats.

(B) Give a reason for :

Arctic fox has a thick white fur.

....

....

2 (A) Put (✓) or (✗) :

1. Ecosystem include nonliving things only. ( )
2. Antarctic is a cold desert biome. ( )
3. The light is one of the abiotic factors, which affects the plant's growth. ( )

(B) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Temperature	a. it is a large ecosystem that has a cold climate.
2. Caribou	b. it is one of biotic factors of an ecosystem.
3. Desert	c. it is a type of plants that live in desert.
4. Arctic region	d. it is one of abiotic factors of an ecosystem.
	e. it is a large ecosystem that has a hot climate.

1. .... 2. .... 3. .... 4. ....

3 Complete the following sentences by using the words between brackets :

(flowers – intensity – light – biotic factors – abiotic factors)

1. The plants can't grow in the presence of air and water, while .... which considered as one of the .... is absent.
2. The duration of light and its .... affect the plant's growth.
3. Chrysanthemum plant which considered as one of the .... can produce .... when the days are shorter than the nights.

Self-Assessment 11 till Lesson 3

1 (A) Put (✓) or (✗) :

1. Offspring receive their environmental factors from their parents. (   )
2. Inherited traits carry genes which apper on the offspring. (   )
3. Birman cats have long and silky hair with different colors. (   )

(B) Give a reason for :

Young sphynx cat doesn't have any hair.

....

....

2 (A) Complete the following sentences :

1. The emperor penguin is affected by .... factors differ from that affect the african penguin due to the difference of their locations.
2. Poison dart frog and arctic fox are affected by different environmental factors, because they live in two different ....
3. The response of plant's growth to the amount of light, means a response of .... factor to abiotic factor.

(B) What happens if ...?

There is no sanitation services are available.

....

....

3 Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Drinking more soda	a. it is an inherited trait.
2. Difficulty to obtain food	b. it is a good lifestyle choice.
3. Eye color	c. it is an environmental factor that affects the human growth.
	d. it is a bad lifestyle choice.

1. .... 2. .... 3. ....

Model Exam
on Concept (4.1)

1 **(A) Choose the correct answer :**

1. Photosynthesis process is affected by some environmental factors such as ....
   a. availability of water only.
   b. availability of light only.
   c. availability of water and light.
   d. the length of the plants.
2. Poison dart frog lives in .... environment.
   a. arctic
   b. antarctic
   c. desert
   d. tropical rain forest
3. Bad habits in human lifestyle include ....
   a. eating healthy food.
   b. doing excercises.
   c. drinking more soda.
   d. avoid smoking.
4. The Red Sea in Egypt includes all of the following environments, except .... environment.
   a. marine
   b. mountain
   c. rainforest
   d. coastal

(B) Give a reason for the following :

African penguin has a circle of skin that doesn't have any feathers around each of its eyes.

....

....

2 **(A) Write the scientific term of each of the following :**

1. They are responsible for determining the body feature, and present in the cell nucleus. (..........)
2. A process through which the living organism be able to live and survive in its environment. (..........)
3. It contains biotic factors and abiotic factors that interact with each other. (..........)
4. They are external factors that affect our health and we might not able to control them. (..........)

(B) What happens if ... ?

The environmental conditions changes in the homeland in which some migratory birds live.

....

3 (A) Put (✓) or (X) : *(5 marks)*

1. Abiotic factors affect the growth and the adaptation of biotic factors. ( )
2. All birman cats have white, very short and silky hair. ( )
3. Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. ( )
4. The amount of light affects the growth of plants. ( )

(B) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Acacia tree	a. it has sandy-colored scales.
2. Poison dart frog	b. it has thick white fur.
3. Emperor penguin	c. it lives in antarctic.
4. Arctic fox	d. it lives in desert.
	e. it lives in tropical rain forest.

1. .... 2. .... 3. .... 4. ....



March Questions Bank





Question 01 — Choose the correct answers

1. The barometer is used to measure ....
   - (a) air temperature.
   - (b) atmospheric pressure.
   - (c) mass
   - (d) length

2. If the temperature at the bottom of a mountain is 15°C, this means it may reach .... °C at the top of this mountain.
   - (a) 30
   - (b) 25
   - (c) 20
   - (d) 2

3. The form of energy that flows from a hot object to a cold object is called .... energy.
   - (a) sound
   - (b) thermal
   - (c) potential
   - (d) magnetic

4. Extreme weather conditions include all the following, except ....
   - (a) drought
   - (b) flooding
   - (c) sandstorms
   - (d) sunrise

5. Heat transfers from the .... object to the .... object.
   - (a) big - small
   - (b) small - big
   - (c) hot - cold
   - (d) cold - hot

6. Convection is a way of transferring of heat in liquids and gases due to the difference in ....and ....
   - (a) mass - color.
   - (b) shape - volume.
   - (c) temperature - density.
   - (d) color - temperature.

7. Water vapor in the atmosphere can condense and form ....
   - (a) air
   - (b) clouds
   - (c) sunlight
   - (d) wind

8. Drought affects all the following, except ....
   - (a) people
   - (b) plants
   - (c) buildings
   - (d) animals

9. The density of cold dry air is .... that of hot humid air.
   - (a) more than
   - (b) equal to
   - (c) less than
   - (d) similar to

10. .... is used to measure the speed of tornado's winds.
    - (a) Barometer
    - (b) Thermometer
    - (c) Satellite
    - (d) Anemometer

11. The change of water from liquid state to gas state is known as .... process.
    - (a) evaporation
    - (b) melting
    - (c) condensation
    - (d) freezing

12. .... looks like a solid wall of debris and dust traveling along the horizon.
    - (a) A flood
    - (b) A sandstorm
    - (c) A drought
    - (d) A tsunami

13. The increase in the amount of rain may cause ....
    - (a) flooding
    - (b) drought
    - (c) sandstorm
    - (d) dust storm

14. A rain shadow is an area that is formed behind a ....
    - (a) tree
    - (b) mountain
    - (c) building
    - (d) bridge

15. When air is heated, its .... changes.
    - (a) mass
    - (b) smell
    - (c) color
    - (d) density

Question 02 put (true) or (false)

1. Precipitation occurs after condensation of water vapor in the sky. (   )
2. Sand cools down in a shorter time than sea water during nighttime. (   )
3. When the air is cooled, it rises up. (   )
4. Heavy rain may cause drought. (   )
5. When rain doesn't fall, soil may dry and plants may die. (   )
6. The rain never falls on deserts. (   )
7. Cold air has more density than hot air. (   )
8. Reusing water is a useful way to irrigate crops in desert farms. (   )
9. Sandstorms blow up from a dry area such as seas and oceans (   )
10. Solar energy and wind turbines can be used to operate desert farms. (   )
11. Transfer of heat by convection occurs in solids, liquids and gases. (   )
12. Sandstorms decrease the visibility during driving cars (   )
13. The sand absorbs heat slower than water during daytime. (   )
14. Floods may cause death of people and animals (   )
15. Hot air rises above colder air. (   )

Question 03 complete the following sentences

1. Hot air rises up as it has .... density than cold air.
2. Sea water absorbs heat slowly and loses it ....
3. When the hot and humid air meets the cold and dry air, the ....air rises.
4. The horizontal movement of air is called .... whereas the vertical movement of air is called ....
5. The amount of rain that falls on deserts is .... than that which falls in other biomes.
6. At night, the sand on the seashore cools .... than the sea water.
7. The density of hot soup is .... than that of cold soup.
8. A thermometer is used to measure................, while a barometer is used to measure ....
9. The side of coastal mountain ranges in which air moves up when hitting a mountain is the .... side, while the other side is the .... side.
10. Gases and liquids expand by .... and contract by cooling.

Question 04 write the scientific term for each of the following

1. A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail. ( )
2. It is the weight of the air above an area. ( )
3. A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs. ( )
4. A side of mountain ranges at coastal regions that face the coast. ( )
5. A device used to measure atmospheric pressure. ( )
6. It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. ( )
7. A device used to measure temperature. ( )
8. A scientist who studies the atmosphere to understand Earth's weather. ( )
9. A phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. ( )
10. A scientist who studies the Earth's atmosphere and forecasts the weather ( )

Question 05 — Give reason for each of the following

1. Desert farming faces many difficulties.

....

2. Extreme weather became more stronger in many places around the world.

....

3. Sometimes people prefer to live in desert land instead of cities.

....

4. At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.

....

5. Hot air moves up, while cold air moves down.

....

6. Floods have some benefits.

....

7. When air is heated, it expands.

....

8. Sandstorms have harmful effects on human health.

....

Question 06 — What happens if ..... ?

1. We boil water in a pot on the stove. (Concerning the movement of hot water and cold water).

....

2. 2. The temperature of a desert sand at night.

....

3. Buildings when they are subjected to strong floods.

....

4. The atmospheric pressure, as we move up toward the top of a mountain.

....

8. The temperature of water inside a beaker if we put it under a lighted lamp for few minutes.

....

9. Solar panels when dust accumulates on them.

....

10. Air density, as we move down toward the bottom of a mountain.

....

Question 01 Choose the correct answers

CONCEPT 4.1

1. Transferring of genetic factors happens in ....
   - (a) humans only
   - (b) animals only
   - (c) Humans,animals
   - (d) humans, animals,plants

2. Dorcas gazelle lives in ....
   - (a) tropical area
   - (b) desert area
   - (c) north pole.
   - (d) south pole

3. Arctic fox has .... to warm its body.
   - (a) colorful poisonous skin
   - (b) sandy-colored scales
   - (c) thin white fur
   - (d) thick white fur

4. Acacia tree and arctic fox live in .... environment.
   - (a) desert
   - (b) arctic
   - (c) rain forest
   - (d) two different

5. The adaptation that is related to the body structure of a living organism, is known as ....
   - (a) structural adaptation.
   - (b) behavioral adaptation
   - (c) homeland
   - (d) stopover

6. Each environment on planet Earth has specific ....
   - (a) climate only.
   - (b) plants only.
   - (c) animals only
   - (d) climate, plants and animals.

7. Genes are tiny structures that found in ....

   a. the cell nucleus.
   b. the cell membrane
   c. the cell wall.
   d. mitochondria

8. The Red Sea in Egypt includes all of the following environments, except .... environment.

   a. marine
   b. mountain
   c. rain forest
   d. coastal

9. Poison dart frog lives in .... environment.

   a. arctic
   b. antarctica
   c. desert
   d. tropical rain forest

10. Birman cats have ....

    a. very fine hair
    b. long and silky hair
    c. no hair
    d. black feathers.

11. All the following are biotic factors, except ....

    a. animals
    b. insects
    c. precipitation
    d. grasses

12. All the following are inherited traits in plants, except ....

    a. leaves color
    b. leaves shape.
    c. length of stem.
    d. length of ears.

13. Abiotic factors in an ecosystem include ....

    a. animals and air.
    b. grasses and soil.
    c. living organisms
    d. nonliving things.

14. Sphynx cats and birman cats are different in the ....

    a. number of eyes.
    b. number of ears.
    c. number of legs.
    d. length of hair

15. Plants respond to the amount of .... they receive daily.

    a. light only
    b. dark only
    c. light and dark
    d. biotic factors

Question 02 put (true) or (false)

1. It is easy for animals to live in the desert environments ( )
2. Different types of environments have different types of plants and animals ( )
3. All living organisms inherited traits from their parents. ( )
4. The skin of poison dart frog cannot protect it from predators. ( )
5. Inherited traits not affect the structure of living organisms. ( )

6. Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. ( )
7. Animals migrate from one place to another seasonally. ( )
8. Acacia trees and palms are adapted to live in desert environment. ( )
9. Birds migrate to areas that have no food or water. ( )
10. Ecosystem contains biotic factors and abiotic factors. ( )
11. Sphynx cat doesn't have any hair or have only very fine hair. ( )
12. Thorns on a plant stem, is an example of structural adaptation. ( )
13. Ecosystems include living organisms only. ( )
14. Your health will be positively affected, if you drink unclean water ( )
15. All birman cats have white, very short and silky hair ( )
16. Genes carry inherited traits from parents to their offspring. ( )
17. The amount of light affects the growth of plants. ( )
18. Abiotic factors of an ecosystem can eat, breathe and grow. ( )
19. Dorcas gazelle can live in both desert area and semidesert area. ( )
20. Deserts may be hot areas or cold areas. ( )

Question 03 complete the following sentences

1. Any ecosystem contains .... factors and .... factors.
2. All living organisms inherited .... factors which transferred from parents to their offspring.
3. Living organisms of an ecosystem include humans, animals and ....
4. Hot deserts have a little amount of .... far below the ground surface.
5. Both of environmental factors and .... factors affect the growth of living organisms.
6. The way of your earlobes hang and the length of your fingers are two .... traits controlled by .... that are found in the cell nucleus.
7. Some desert plants have thick leaves to store ....
8. Thick fur is an example of structural adaptation for animals that live in .... climate.
9. Abiotic factors include all .... things.

10. Sphynx cat doesn't have the genetic factor for .... which is found in .... cat.
11. Some desert plants can store water in their .... and ....
12. Both of the .... Sea and the .... River are two important stopovers in Egypt for migratory birds.
13. Color and place of the flower are two inherited .... in plants.
14. Some plants like palms and acacia trees live in the .... environment in Egypt.
15. Bird migration helps them to search for different .... sources and suitable .... to live in.
16. Light, air and water are .... needs for plants to grow.
17. The type of cats that inherits its hairless body from its parents, is known as .... cats.
18. African penguin has a circle of skin that doesn't have any .... around each of its eyes.
19. Food, water and .... are the basic needs for living organisms to live and survive.
20. Plants respond to the amount of ....and dark they receive daily to grow.

Question 04 — write the scientific term for each of the following

1. The factors that include nonliving things in an ecosystem. (   )
2. A type of cats that doesn't have the genetic factor of long hair. (   )
3. A process through which the living organism be able to live and survive in its environment. (   )
4. It is a desert biome that has a cold climate all the year. (   )
5. The factors that include living organisms in an ecosystem. (   )
6. They are external factors that affect our health and we might not able to control them. (   )
7. It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (   )
8. A type of cats that have long, silky hair with different colors. (   )
9. An important stopover in Egypt for migratory birds, that includes marine, coastal and mountain environments. (   )
10. They are responsible for determining the body feature, and present in the cell nucleus. (   )

11. It is the factor that controls which trait gets inherited from parents to their offspring. ( )
12. It is a change in the behaviors or acts of a living organism to help it survive. ( )
13. It contains biotic factors and abiotic factors that interact with each other. ( )
14. It is a change in the body structure of living organisms that helps them to survive. ( )

Question 05 Give reason for each of the following

1. Some plants in deserts produce seeds that can live for a long time.

....

2. Sphynx cat doesn't have long hair.

....

3. Small dorcas gazelle is similar to its parents.

....

4. Most of desert plants have short extended roots near the Earth's surface.

....

5. Falcons and eagles migrate to Egypt in winter.

....

6. A birman kitten has a long and silky hair.

....

7. African penguin has a circle of skin that doesn't have any feather around each of its eyes.

....

8. Birds migrate from one place to another place.

....

9. Poison dart frog has colorful poisonous skin.

....

10. Your lifestyle choices affect your health.

....

11. Some plants which live in desert environment have long roots.

....

12. Lizard body is covered with sandy-colored scales.

....

Question 06 What happens if ..... ?

1. The living organisms in an ecosystem, if water and light are not available.

....

2. The genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring.

....

3. The plants in an ecosystem, if they receive too intense light.

....

4. The environmental conditions change in the homeland in which some migratory birds live.

....

8. Two similar plants, if they are exposed to the same intensity and duration of light.

....

9. The inherited traits are transferred from desert plants to another through generations.

....

انتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق

Answers





March Questions Bank



Question 01 Choose the correct answers

CONCEPT 3.2

1. The barometer is used to measure ....
   - (a) air temperature.
   - (b) atmospheric pressure.
   - (c) mass
   - (d) length

2. If the temperature at the bottom of a mountain is 15°C, this means it may reach .... °C at the top of this mountain.
   - (a) 30
   - (b) 25
   - (c) 20
   - (d) 2

3. The form of energy that flows from a hot object to a cold object is called .... energy.
   - (a) sound
   - (b) thermal
   - (c) potential
   - (d) magnetic

4. Extreme weather conditions include all the following, except ....
   - (a) drought
   - (b) flooding
   - (c) sandstorms
   - (d) sunrise

5. Heat transfers from the .... object to the .... object.
   - (a) big - small
   - (b) small - big
   - (c) hot - cold
   - (d) cold - hot

6. Convection is a way of transferring of heat in liquids and gases due to the difference in ....and ....
   - (a) mass - color.
   - (b) shape - volume.
   - (c) temperature - density.
   - (d) color - temperature.

7. Water vapor in the atmosphere can condense and form ....
   - (a) air
   - (b) clouds
   - (c) sunlight
   - (d) wind

8. Drought affects all the following, except ....
   - (a) people
   - (b) plants
   - (c) buildings
   - (d) animals

9. The density of cold dry air is .... that of hot humid air.
   - (a) more than
   - (b) equal to
   - (c) less than
   - (d) similar to

10. .... is used to measure the speed of tornado's winds.
    - (a) Barometer
    - (b) Thermometer
    - (c) Satellite
    - (d) Anemometer

11. The change of water from liquid state to gas state is known as .... process.
    - (a) evaporation
    - (b) melting
    - (c) condensation
    - (d) freezing

12. .... looks like a solid wall of debris and dust traveling along the horizon.
   - a) A flood
   - b) A sandstorm
   - c) A drought
   - d) A tsunami

13. The increase in the amount of rain may cause ....
   - a) flooding
   - b) drought
   - c) sandstorm
   - d) dust storm

14. A rain shadow is an area that is formed behind a ....
   - a) tree
   - b) mountain
   - c) building
   - d) bridge

15. When air is heated, its .... changes.
   - a) mass
   - b) smell
   - c) color
   - d) density

Question 02 put (true) or (false)

1. Precipitation occurs after condensation of water vapor in the sky. ✓
2. Sand cools down in a shorter time than sea water during nighttime. ✓
3. When the air is cooled, it rises up. ✗
4. Heavy rain may cause drought. ✗
5. When rain doesn't fall, soil may dry and plants may die. ✓
6. The rain never falls on deserts. ✗
7. Cold air has more density than hot air. ✓
8. Reusing water is a useful way to irrigate crops in desert farms. ✓
9. Sandstorms blow up from a dry area such as seas and oceans ✗
10. Solar energy and wind turbines can be used to operate desert farms. ✓
11. Transfer of heat by convection occurs in solids, liquids and gases. ✗
12. Sandstorms decrease the visibility during driving cars ✓
13. The sand absorbs heat slower than water during daytime. ✗
14. Floods may cause death of people and animals ✓
15. Hot air rises above colder air. ✓



Question 03 complete the following sentences

1. Hot air rises up as it has less density than cold air.
2. Sea water absorbs heat slowly and loses it slowly.
3. When the hot and humid air meets the cold and dry air, the hot air rises.
4. The horizontal movement of air is called wind whereas the vertical movement of air is called air current.
5. The amount of rain that falls on deserts is less than that which falls in other biomes.
6. At night, the sand on the seashore cools faster than the sea water.
7. The density of hot soup is less than that of cold soup.
8. A thermometer is used to measure temperature, while a barometer is used to measure atmospheric pressure.
9. The side of coastal mountain ranges in which air moves up when hitting a mountain is the wet side, while the other side is the dry side.
10. Gases and liquids expand by heating and contract by cooling.

Question 04 write the scientific term for each of the following

1. A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail. — Precipitation
2. It is the weight of the air above an area. — Atmospheric pressure
3. A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs. — A dry side
4. A side of mountain ranges at coastal regions that face the coast. — A wet side
5. A device used to measure atmospheric pressure. — Barometer
6. It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks. — Flooding
7. A device used to measure temperature. — Thermometer
8. A scientist who studies the atmosphere to understand Earth's weather. — Meteorologist
9. A phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. — Dust storm
10. A scientist who studies the Earth's atmosphere and forecasts the weather — Meteorologist

Question 05 Give reason for each of the following

1. Desert farming faces many difficulties.
   Because the desert's climate is hot and the amount of water is small.

2. Extreme weather became more stronger in many places around the world.
   Due to global climate change.

3. Sometimes people prefer to live in desert land instead of cities.
   Due to the fast population growth in cities.

4. At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water.
   Because sand is heated up faster than water.

5. Hot air moves up, while cold air moves down.
   Because the hot air has low density, while the cold air has high density.

6. Floods have some benefits.
   Because some ecosystems depend on floods such as ecosystems along the Nile.

7. When air is heated, it expands.
   Because the molecules of air move away from each other.

8. Sandstorms have harmful effects on human health.
   Because sandstorms harm the human eyes and respiratory system.

Question 06 What happens if ..... ?

1. We boil water in a pot on the stove. (Concerning the movement of hot water and cold water).
   Hot water moves up and cold water falls down.

2. 2. The temperature of a desert sand at night.
   The temperature of a desert sand will decrease.

3 Buildings when they are subjected to strong floods.

<u>They may be damaged by moving or breaking them.</u>

4 The atmospheric pressure, as we move up toward the top of a mountain.

<u>The atmospheric pressure decreases.</u>

8 The temperature of water inside a beaker if we put it under a lighted lamp for few minutes.

<u>The temperature of water will increase.</u>

9 Solar panels when dust accumulates on them.

<u>Solar panels stop generating energy.</u>

10 Air density, as we move down toward the bottom of a mountain.

<u>Air density will increase.</u>

Question 01 — Choose the correct answers



1 Transferring of genetic factors happens in ....

(a) humans only (b) animals only (c) Humans,animals (d) <u>humans, animals,plants</u>

2 Dorcas gazelle lives in ....

(a) tropical area (b) <u>desert area</u> (c) north pole. (d) south pole

3 Arctic fox has .... to warm its body.

(a) colorful poisonous skin (b) sandy-colored scales (c) thin white fur (d) <u>thick white fur</u>

4 Acacia tree and arctic fox live in .... environment.

(a) desert (b) arctic (c) rain forest (d) <u>two different</u>

5 The adaptation that is related to the body structure of a living organism, is known as ....

(a) <u>structural adaptation.</u> (b) behavioral adaptation (c) homeland (d) stopover

6 Each environment on planet Earth has specific ....

(a) climate only. (b) plants only. (c) animals only (d) <u>climate, plants and animals</u>.

7. Genes are tiny structures that found in ....
   - a) the cell nucleus.
   - b) the cell membrane
   - c) the cell wall.
   - d) mitochondria

8. The Red Sea in Egypt includes all of the following environments, except .... environment.
   - a) marine
   - b) mountain
   - c) rain forest
   - d) coastal

9. Poison dart frog lives in .... environment.
   - a) arctic
   - b) antarctica
   - c) desert
   - d) tropical rain forest

10. Birman cats have ....
    - a) very fine hair
    - b) long and silky hair
    - c) no hair
    - d) black feathers.

11. All the following are biotic factors, <u>except</u> ....
    - a) animals
    - b) insects
    - c) precipitation
    - d) grasses

12. All the following are inherited traits in plants, except ....
    - a) leaves color
    - b) leaves shape.
    - c) length of stem.
    - d) length of ears.

13. Abiotic factors in an ecosystem include ....
    - a) animals and air.
    - b) grasses and soil.
    - c) living organisms
    - d) nonliving things.

14. Sphynx cats and birman cats are different in the ....
    - a) number of eyes.
    - b) number of ears.
    - c) number of legs.
    - d) length of hair

15. Plants respond to the amount of .... they receive daily.
    - a) light only
    - b) dark only
    - c) light and dark
    - d) biotic factors

Question 02 put (true) or (false)

1. It is easy for animals to live in the desert environments ✗
2. Different types of environments have different types of plants and animals ✓
3. All living organisms inherited traits from their parents. ✓
4. The skin of poison dart frog cannot protect it from predators. ✗
5. Inherited traits not affect the structure of living organisms. ✗

6. Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem. 
7. Animals migrate from one place to another seasonally. 
8. Acacia trees and palms are adapted to live in desert environment. ✔
9. Birds migrate to areas that have no food or water. 
10. Ecosystem contains biotic factors and abiotic factors. 
11. Sphynx cat doesn't have any hair or have only very fine hair. 
12. Thorns on a plant stem, is an example of structural adaptation. 
13. Ecosystems include living organisms only. 
14. Your health will be positively affected, if you drink unclean water ✖
15. All birman cats have white, very short and silky hair ✖
16. Genes carry inherited traits from parents to their offspring. ✔
17. The amount of light affects the growth of plants. ✔
18. Abiotic factors of an ecosystem can eat, breathe and grow. ✖
19. Dorcas gazelle can live in both desert area and semidesert area. ✔
20. Deserts may be hot areas or cold areas. ✔

Question 03 complete the following sentences

1. Any ecosystem contains biotic factors and abiotic factors.
2. All living organisms inherited genetic factors which transferred from parents to their offspring.
3. Living organisms of an ecosystem include humans, animals and plants.
4. Hot deserts have a little amount of groundwater far below the ground surface.
5. Both of environmental factors and genetic factors affect the growth of living organisms.
6. The way of your earlobes hang and the length of your fingers are two inherited traits controlled by genes that are found in the cell nucleus.
7. Some desert plants have thick leaves to store water.
8. Thick fur is an example of structural adaptation for animals that live in cold climate.
9. Abiotic factors include all nonliving things.




10. Sphynx cat doesn't have the genetic factor for long hair which is found in birman cat.
11. Some desert plants can store water in their leaves and stems.
12. Both of the Red Sea and the Nile River are two important stopovers in Egypt for migratory birds.
13. Color and place of the flower are two inherited traits in plants.
14. Some plants like palms and acacia trees live in the desert environment in Egypt.
15. Bird migration helps them to search for different food sources and suitable habitats to live in.
16. Light, air and water are basic needs for plants to grow.
17. The type of cats that inherits its hairless body from its parents, is known as sphynx cats.
18. African penguin has a circle of skin that doesn't have any feathers around each of its eyes.
19. Food, water and habitats are the basic needs for living organisms to live and survive.
20. Plants respond to the amount of light and dark they receive daily to grow.

Question 04 — write the scientific term for each of the following

1. The factors that include nonliving things in an ecosystem. — Abiotic factors
2. A type of cats that doesn't have the genetic factor of long hair. — Sphynx cats
3. A process through which the living organism be able to live and survive in its environment. — Adaptation
4. It is a desert biome that has a cold climate all the year. — Antarctic region
5. The factors that include living organisms in an ecosystem. — Biotic factors
6. They are external factors that affect our health and we might not able to control them. — Environmental factors
7. It is a type of behavioral adaptation in which animals move in a certain season from one place to another. — Migration
8. A type of cats that have long, silky hair with different colors. — Birman cats
9. An important stopover in Egypt for migratory birds, that includes marine, coastal and mountain environments. — The Red Sea
10. They are responsible for determining the body feature, and present in the cell nucleus. — Genes



11	It is the factor that controls which trait gets inherited from parents to their offspring.	Genetic factor
12	It is a change in the behaviors or acts of a living organism to help it survive.	Behavioral adaptation
13	It contains biotic factors and abiotic factors that interact with each other.	Ecosystem
14	It is a change in the body structure of living organisms that helps them to survive.	Structural adaptation

Question 05 — Give reason for each of the following

1. Some plants in deserts produce seeds that can live for a long time.
   Because in deserts there are shortage of rain fall for a long time.
2. Sphynx cat doesn't have long hair.
   Because it doesn't have the genetic factor for long hair.
3. Small dorcas gazelle is similar to its parents.
   Because they get some genetic factors from their parents.
4. Most of desert plants have short extended roots near the Earth's surface.
   To absorb any available water and to catch the smallest drops of dew.
5. Falcons and eagles migrate to Egypt in winter.
   Because Egypt in winter has a moderate climate condition.
6. A birman kitten has a long and silky hair.
   Because it inherits this trait from its parents.
7. African penguin has a circle of skin that doesn't have any feather around each of its eyes.
   To help its body cool fast in hot climate.
8. Birds migrate from one place to another place.
   To search for the best conditions that help them reproduce and preserve their species.
9. Poison dart frog has colorful poisonous skin.
   To protect itself from predators.

10. Your lifestyle choices affect your health.

Because it depends on your behavior which may be good habits or bad habits.

11. Some plants which live in desert environment have long roots.

To get the deep groundwater.

12. Lizard body is covered with sandy-colored scales.

To hide among rocks in desert.

Question 06 What happens if ..... ?

1. The living organisms in an ecosystem, if water and light are not available.

Livings organisms can't survive and will die.

2. The genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring.

The trait of hairless body appears on the offspring.

3. The plants in an ecosystem, if they receive too intense light.

The too intense light may damage the plant's parts and cause their drying or burning.

4. The environmental conditions change in the homeland in which some migratory birds live.

They will migrate to another suitable habitat

8. Two similar plants, if they are exposed to the same intensity and duration of light.

The two plants will grow with the same rate.

9. The inherited traits are transferred from desert plants to another through generations.

The desert plants are more adapted to survive in extreme desert conditions.

انتهت الأسئلة مع أطيب الامنيات بالنجاح والتوفيق



February Revision

Mr. Ahmed ElBasha

(1) Write the scientific term:

1)	A scientist who studies the atmosphere to understand Earth's weather.	....
2)	A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs.	....
3)	A device used to measure atmospheric pressure.	....
4)	A device used to measure temperature.	....
5)	It is the weight of the air above an area .	....
6)	A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail.	....
7)	It is a natural phenomenon that occurs when the level of water in a river increases until it overflows its banks .	....
8)	A process through which the living organism be able to live and survive in its environment	....
9)	It is a type of behavioral adaptation in which animals move in a certain season from one place to another	....
10)	It is a change in the body structure of living organisms that helps them to survive.	....
11)	The factors that include living organisms in an ecosystem	....
12)	The factors that include nonliving things in an ecosystem.	....

✸(2) Choose the right answer:

1. Desert farming depends on the maximum use of .... as its quantity is very small.

a. sand b. sunlight c. water d. winds

2. At the top of the mountain, the atmospheric pressure is .... and the temperature is .... compared to the bottom of the mountain.

a. lower- lower b. higher - higher
c. lower - higher d. higher - lower

3. The density of cold dry air is .... that of hot humid air.

a. more than b. equal to c. less than d. similar to

4. A rain shadow is an area that is formed behind a ....

a. tree. b. mountain. c. building. d. bridge.

5. If the temperature at the bottom of a mountain is 15°C, this means it may reach .... °C at the top of this mountain.

a. 30 b. 25 c. 20 d. 2

6. The change of water from liquid state to gas state is known as .... process.

a. evaporation b. melting c. condensation d. freezing

7. Water vapor in the atmosphere can condense and form ....

a. air. b. clouds. c. sunlight. d. wind.

8. The barometer Is used to measure ....

a. air temperature. b. atmospheric pressure.
c. mass. d. length.

9. Instruments like thermometers and barometers can be carried into the atmosphere to measure weather conditions from different altitudes by using all of these tool, except ....

a. satellites. b. weather balloons.
c. airplanes. d. cars .

10. Heat transfers from the .... object to the .... object.

a. big - small b. small - big c. hot- cold d. cold - hot

11. Land heats up .... and cools down .... compared to that of water.

a. quickly - quickly b. slowly - slowly
c. quickly- slowly d. slowly- quickly

12. If the temperature of the sand in a desert is 50°C at noon, its temperature may reach .... °C at night.

a. 20 b. 60 c. 70 d. 80

13. The form of energy that flows from a hot object to a cold object is called .... energy.

a. sound b. thermal c. magnetic d. potential

14. Heat transfers by convection in .... and ....

a. liquids - gases.
b. solids - liquids.
c. solids - gases.
d. liquids - space.

15. When convection occurs in the atmosphere ....

a. cold air rises up and warm air falls down.
b. warm air rises up and cold air falls down.
c. both cold air and warm air rise up.
d. both cold air and warm air fall down.

16. Heat is transferred through the atmosphere by ....

a. convection.
b. conduction.
c. reflection.
d. absorption.

17. When air is heated, its .... changes.

a. mass
b. smell
c. color
d. density

18. Extreme weather conditions include all the following, except ....

a. drought.
b. flooding.
c. sandstorms.
d. sunrise.

19. The increase in the amount of rain may cause ....

a. flooding.
b. drought.
c. sandstorm.
d. dust storm.

20. Floods may occur as a result of .... and ....

a. gentle rain - melting of snow.
b. heavy rain - melting of snow.
c. gentle rain - freezing of water.
d. heavy rain - evaporation of water.

21. When air is heated, its .... changes.

a. smell
b. color
c. density
d. mass

22. Dorcas gazelle lives in ....

a. tropical area.
b. desert area.
c. north pole.
d. south pole.

23. The adaptation that is related to the body structure of a living organism, is known as ....

a. structural adaptation.
b. behavioral adaptation.
c. homeland.
d. stopover.

24. Birds migrate to search for all of the following, except ....

a. best conditions for reproduction.
b. different food resources.
c. another suitable habitat.
d. another unsuitable climate.

25. Migration of animals to search for food, is considered as ....

a. a type of structural adaptation only.
b. a type of behavioral adaptation only.
c. structural and behavioral adaptations.
d. a way to find more predators.

26. Poison dart frog lives in .... environment.

a. arctic
b. antarctic
c. desert
d. tropical rain forest

27. An area between buildings that contains grasses, insects and weeds represents ....

a. a large ecosystem.
b. a small ecosystem.
c. structural characteristics.
d. physical characteristics.

28. All the following are biotic factors, except ....

a. animals.
b. insects.
c. precipitation.
d. grasses.

29. Abiotic factors in an ecosystem include ....

a. animals and air.
b. grasses and soil.
c. living organisms.
d. nonliving things.

30. Plants, animals and water are ....

a. biotic factors only.
b. abiotic factors only.
c. biotic and abiotic factors.
d. behavioral characteristics.

31. The plant's growth is affected by ....

a. amount of darkness.
b. intensity of light only.
c. duration of light only.
d. intensity and duration of light.

32. Transferring of some properties from parents to offspring occurs in ....

a. living organisms only.
b. nonliving things only.
c. living organisms and nonliving things.
d. soil, air, water and sunlight.

33. The genetic factors transfer from ....

a. living organism to nonliving thing.
b. nonliving thing to living organism.
c. parents to their offspring.
d. offspring to their parents.

34. Transferring of genetic factors happens in ....

a. humans only.
b. animals only.
c. humans and animals.
d. humans, animals and plants.

35. Appearance of inherited traits on offspring, is due to passing down .... from their parents.

a. environmental factors
b. behaviors
c. genetic factors
d. leaves

36. All the following are inherited traits in plants, except ....

a. leaves color.
b. leaves shape.
c. length of stem.
d. length of ears.

✹(3) Complete the following:

1. The scientist who studies the Earth's atmosphere is called ....
2. The side of coastal mountain ranges in which air moves up when hitting a mountain is the .... side, while the other side is the .... side.
3. Farmers in desert may use the .... energy produced from the Sun to power their farms.
4. As you climb to the top of a mountain, the air density will .... while as you move down toward the bottom of it, the air temperature will ....
5. At night, the sand on the seashore cools .... than the sea water.
6. When air is heated, the .... air will rise above the .... air.
7. The horizontal movement of air is called ...., whereas the vertical movement of air is called ....
8. Some desert plants have thick leaves to store ....
9. Living organisms of an ecosystem include humans, animals and ....
10. Any ecosystem contains .... factors and .... factors.
11. Abiotic factors includes all .... things.
12. Plants respond to the amount of .... and dark they receive daily to grow.
13. All living organisms inherited .... factors which transferred from parents to their offspring.

(4) Put (√) or (X):

1. The rain never falls on deserts . ( )
2. People in desert areas face a lot of challenges in desert farming . ( )
3. The air becomes more dense at the top of the mountain compared to the bottom of the mountain. ( )
4. Precipitation occurs after condensation of water vapor in the sky . ( )
5. Solar energy and wind turbines can be used to operate desert farms . ( )
6. Reusing water is a useful way to irrigate crops in desert farms ( )
7. The sand absorbs heat slower than water during daytime. ( )
8. Sand cools down in a shorter time than sea water during nighttime. ( )
9. When rain doesn't fall, soil may dry and plants may die. ( )
10. By increasing the temperature of air, its density increases. ( )
11. Sand cools down in a shorter time than sea water during nighttime. ( )
12. If the temperature of the sand in a desert is 42°C at noon, its temperature may reach 55°C at night. ( )
13. Heavy rain may cause drought. ( )
14. When rain doesn't fall, soil may dry and plants may die . ( )
15. Although flooding is harmful, it also has some benefits. ( )
16. Sandstorms decrease the visibility during driving cars. ( )
17. Floods may cause death of people and animals. ( )
18. Cold air has more density than hot air. ( )
19. By increasing the temperature of air, its density decreases. ( )
20. When the air is cooled, it rises up. ( )
21. Hot air rises above colder air. ( )
22. All living organisms inherited traits from their parents. ( )
23. Inherited traits not affect the structure of living organisms . ( )
24. Transferring of inherited traits through generations of desert plants, make them more adapted to survive in extreme desert conditions. ( )

25. Environmental and genetic factors affect the behaviors, structure and the growth of living organisms. ( )

26. Different types of environments have different types of plants and animals. ( )

27. Acacia trees and palms are adapted to live in desert environment. ( )

28. Ecosystems include living organisms only. ( )

29. Ecosystem contains biotic factors and abiotic factors. ( )

30. Abiotic factors of an ecosystem can eat, breathe and grow. ( )

31. Biotic factors of an ecosystem include sunlight, air and water. ( )

32. Abiotic factors affect the growth and the adaptation of biotic factors. ( )

33. The amount of light affects the growth of plants. ( )

34. Deserts may be hot areas or cold areas. ( )

35. Antarctica is a hot desert biome. ( )

36. The light is one of the biotic factors, which affects the plant's growth. ( )

37. The intensity and duration of light affect the plant's growth. ( )

38. It is easy for animals to live in the desert environments. ( )

39. Thorns on a plant stem, is an example of structural adaptation. ( )

40. Animals migrate from one place to another seasonally. ( )

41. Migratory birds are affected by environmental factors during their migration ( )

42. In our world there are different kinds of environments. ( )

43. Water and air are from biotic factors in an ecosystem. ( )

44. Abiotic factors have important role in growth of living organisms. ( )

✸(5) Give reason for:

1. Desert farming faces many difficulties. ·
....
2. Sometimes people prefer to live in desert land instead of cities.
....
3. Hot air moves up, while cold air moves down.
....
4. Extreme weather became more stronger in many places around the world.
....
5. Floods have some benefits.
....
6. Falcons and eagles migrate to Egypt in winter.
....
7. Lizard body is covered with sandy-colored scales.
....
8. Some plants which live in desert environment have long roots.
....
9. Your lifestyle choices affect your health.
....

✸(6) What happen if:

1. The atmospheric pressure, as we move up toward the top of a mountain.
....
2. Air density, as we move down toward the bottom of a mountain
....
3. The temperature of a desert sand at night.
....
4. We boil water in a pot on the stove. (Concerning the movement of hot water and cold water).
....
5. Solar panels when dust accumulates on them.
....
6. The living organisms in an ecosystem, if water and light are not available.
....
7. The inherited traits are transferred from desert plants to another through generations.
....

✹(7) Complete the following sentences by using these words:

1. **(weather maps – humidity- barometer)**

1. The instrument that measures the atmospheric pressure is called …...............

2. Meteorologists use …................ to collect and analyze data from different places and over short periods of time.

3. The measure of how much water vapor is present in the air is called …...............

2. **(barometer - rain gauge - weather radar - anemometer)**

1. To know the speed of a tornado's winds, the meteorologist should use ....

2. To know whether it rained more this summer or last summer, the meteorologist should use ....

3. To know the possible path of a hurricane, the meteorologist should use the data from a weather satellite carrying a ....

4. To know the current atmospheric pressure, the meteorologist should use ....

3. **(flooding - drought - decrease - increase – abiotic)**

1. Extreme hot temperatures may cause ....

2. Heavy rain may cause ....

3. Sandstorms .... the chances of car accidents.

4. Dust storms .... the water quality in irrigation canals.

5. Light is an .... environmental factor.

✹(8) Choose from column (B) what suits it in column (A) :

1.

(A)	(B)
1. Leaves shape trait	**a.** inherited in animals.
2. Fur length trait	**b.** inherited in humans.
3. Nose shape trait	**c.** inherited in plants.
4.	**d.** inherited in animals and plants.

1. **2.** **3.**

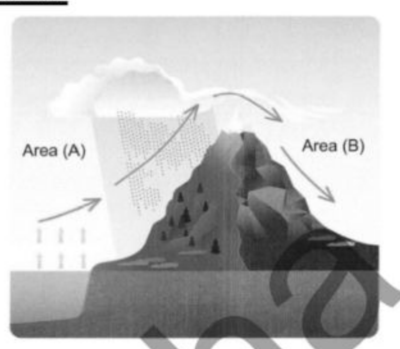
2.

(A)	(B)
1. Structural adaptation	**a.** is an example of structural adaptation.
2. Behavioral adaptation	**b.** like growth of plant toward light.
3. Bird migration	**c.** is an ecosystem.
4. Thorns on a plant stem	**d.** like thick fur of animals that live in cold areas.
	e. is an example of behavioral adaptation.

1. **2.** **3.** **4.**

✸(9) TRY TO ANSWER:

1. Look at the following figure, then complete the sentences below:



1. The air in area .... is dry.
2. Condensation of air occurs in area ....
3. Precipitation occurs in area ....
4. The air in area .... is wet.

2. Look at the following picture that shows the using of concrete in regions with hot summers and cold winters, then choose the correct answer:

1. The temperature inside the building is regulated by absorbing .... energy during the day and releasing it at night.



a. chemical b. sound
c. thermal d. magnetic

2. When sunlight falls on the concrete, its temperature ....

a. increases. b. doesn't change.
c. decreases slowly. d. decreases quickly.

3. Complete the following sentences by using the words between brackets:

(hot - cold - increases - decreases)



1. When the air is heated inside the balloon, the air .... in volume.
2. As the temperature increases, the density of air inside the balloon ....
3. A balloon rises up because the .... air inside the balloon is lighter than the .... air surrounding the balloon.

4. Classify the following inherited traits in the table below:

(Hair length - Leaves shape - Place of the flower - Fur color - Leaves color - Eye color - Ears shape - Flower color - Plant length)

	Animals	Plants
Inherited traits	....	....

5. Study the following two pictures, then answer the following questions:

(A) Put (✓) or (✗) :

1. Animals in both pictures need food, water and habitat to survive. ( )
2. The animal in picture (B) has a body color helps it to survive in its desert environment. ( )
3. Animals in both pictures have a body size similar to its parents. ( )

Picture (A)

Picture (B)

(B) If you know that the bird in picture (A) is a migratory bird, write 2 reasons for its migration :

a. ....

b. ....

6.

Study the following pictures, then put (✓) or (✗) :

(1) (2) (3) (4)

1. The four pictures show some biotic factors and some abiotic factors. ( )
2. The four pictures show some biotic factors that live in three different environments. ( )
3. The animal in picture number (2) lives in an environment that suffers from shortage of water, while the environment in which the animal in picture number (3) lives has a lot of water. ( )
4. Animals in pictures numbers (2) and (4) can't live in the same environment, while living organisms in pictures numbers (1) and (3) can live in the same environment. ( )
5. Caribou can live in the same environment in which the animal in picture number (4) lives. ( )

Model Answer

(1) Write the scientific term:

1. Meteorologist
2. Wet side
3. Barometer
4. Thermometer
5. Atmospheric pressure
6. Precipitation
7. Floods
8. Adaptation
9. Bird migration
10. Structural adaptation
11. Biotic factor
12. Abiotic factor

(2) Choose the right answer:

1. C	9. D	17. D	25. B	33. C
2. A	10. C	18. D	26. D	34. D
3. C	11. A	19. A	27. B	35. C
4. B	12. A	20. B	28. C	36. D
5. D	13. B	21. C	29. D	
6. A	14. A	22. B	30. C	
7. B	15. B	23. A	31. D	
8. B	16. A	24. D	32. A	

(3) Complete the following:

1. Meteorologist
2. Wet – dry
3. Solar
4. Decrease – increase
5. Faster
6. Hot – cold
7. Wind – convection current
8. Water
9. Plants
10. Biotic – abiotic
11. Non-living
12. Light
13. Genetic

(4) Put (√) or (X):

1. (X)	9. (√)	17. (√)	25. (√)	33. (√)	41. (√)
2. (√)	10. (X)	18. (√)	26. (√)	34. (√)	42. (√)
3. (X)	11. (√)	19. (√)	27. (√)	35. (X)	43. (X)
4. (√)	12. (X)	20. (X)	28. (X)	36. (X)	44. (√)
5. (√)	13. (X)	21. (√)	29. (√)	37. (√)	
6. (√)	14. (√)	22. (√)	30. (X)	38. (X)	
7. (X)	15. (√)	23. (X)	31. (X)	39. (√)	
8. (√)	16. (√)	24. (√)	32. (√)	40. (√)	

(5) Give reason for:

1. Because the desert's climate is hot and the amount of water is small.
2. Due to the fast population growth in cities.
3. Because the hot air has low density, while the cold air has high density.
4. Due to global climate change
5. Because some ecosystems depend on floods such as ecosystems along the Nile.
6. Because Egypt in winter has a moderate climate conditions.
7. To hide among rocks in desert.
8. To get the deep groundwater.
9. Because it depends on your behavior which may be good habits or bad habits.

(6) What happen if:

1. The atmospheric pressure decreases.
2. Air density will increase.
3. The temperature of a desert sand will decrease.
4. Hot water moves up and cold water falls down.
5. Solar panels stop generating energy.
6. Living organisms can 't survive and will die.
7. The desert plants are more adapted to survive in extreme desert conditions.

(7) Complete the following sentences by using these words:

1.	2.	3.
1. Barometer 2. weather maps 3. humidity	1. anemometer 2. rain gauge 3. weather radar 4. barometer	1. drought 2. flooding 3. increase 4. decrease 5. abiotic

(8) Choose from column (B) what suits it in column (A) :

1.	2.
1. c 2. a 3. b	**1. d 2. b 3. e**

(9) TRY TO ANSWER:

1.

1. B 2. A 3. A 4. A

2.

1. c 2. a

3.

1. increase 2. Decrease 3. hot - cold

4.

- **Animals:** Hair length - Fur color - Eye color - Ears shape
- **Plants:** Leaves shape - Place of the flower - Leaves color - Flower color - Plant length

5.

A-

1. (√)
2. (√)
3. (√)

B –

a. search for food
b. search reproduction

6.

1. (√)
2. (√)
3. (X)
4. (√)
5. (X)





Concept 3.2

Exam on lesson 1

1. Choose the correct answer: -

1. At the top of the mountain, the atmospheric pressure is………… and the temperature is……………… compared to the bottom of the mountain.
   a. Lower - lower b. higher – higher c. higher – lower d. lower – higher
2. A rain shadow is an area that is formed behind a……………………
   a. Tree b. mountain c. building d. bridge
3. If the temperature at the bottom of a mountain is 15°C, this means it may reach………… °C at the top of this mountain.
   a. 30 b. 25 c. 20 d. 2
4. Water vapor in the atmosphere can condense and form……………………
   a. Air b. clouds c. sunlight d. wind

2. Put (√) or (×):-

1. People in desert areas face a lot of challenges in desert farming. ( )
2. Precipitation occurs after condensation of water vapor in the sky. ( )
3. The properties of the atmosphere at the top of the mountain and at its bottom are similar ( )
4. When the hot and humid air meet the cold and dry air, the hot air rises ( )

3. Write the scientific terms of each of the following:-

1. A scientist who studies the atmosphere to understand Earth's weather (…………………………)
2. A side of mountain ranges at coastal regions that faces the coast (………………………)
3. A side of mountain ranges at coastal regions in which the rain shadow phenomenon occurs (…………)

4. Give reason for:-

1. Sometimes people prefer to live in desert land instead of cities.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

5. What happen to……?

1. The atmospheric pressure, as we move up toward the top of a mountain.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

6. complete the following sentence:-

1. The amount of rain that falls on deserts …………… than that which falls in other biomes
2. The scientist who studies the earth's atmosphere is called ………………
3. Farmers in desert may use the …………… energy produced from the sun to power their farms
4. When the hot and humid air meet the cold and dry air, the …………… air rises

Exam on lesson 2

1. Choose the correct answer:-

1. The barometer is used to measure……………………
   a. air temperature. b. atmospheric pressure c. mass. d. length.
2. Heat transfers from the…………………… object to the................ object.
   a. big – small b. small – big c. hot-cold d. cold-hot
3. Land heats up………….. and cools down………….. compared to that of water.
   a. quickly – quickly b. slowly - slowly c. slowly – quickly d. quickly - slowly
4. If the temperature of sand in a desert is 50°C at noon, its temperature may reach ...°C at night.
   a. 20 b. 60 c. 70 d. 80

2. Put (√) or (×):-

1. The sand absorbs heat slower than water during daytime. ( )
2. Sand cools down in a shorter time than sea water during nighttime. ( )
3. Mapping data allows meteorologists to represent data about weather conditions. ( )

3. Write the scientific terms of each of the following:

1. A scientist who studies the Earth's atmosphere and forecasts the weather. (………………)
2. A device used to measure temperature. (……………………………………………)
3. It is the weight of the air above an area. (…………………………………….)

4. Give reason for:-

1. At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water

……

5. What happen to……?

1. The temperature of a desert sand at night

6. Look at the following picture that shows the using of concrete in regions with hot summers and cold winters, then choose the correct answer:-

1. The temperature inside the building is regulated by absorbing …………… energy during the day and releasing it at night.
   a. Chemical b. sound
   c. thermal d. magnetic
2. When sunlight falls on the concrete its temperature ……………………
   a. Increases b. don't change.
   c. decreases slowly d. decreases quick



Exam on lesson 3

1. Choose the correct answer:-

1. Convection is a way of transferring of heat in liquids and gases due to the difference in……………. and…………………..
   a. mass color b. shape volume. c. temperature - density. d. color temperature.
2. Heat transfers by convection in……………… and……………..
   a. liquids gases. b. solids liquids. c. solids - gases. d. liquids space.
3. Convection currents in the atmosphere are controlled by………………
   a. precipitation. b. moon's rotation.
   c. the energy from the Sun. d. Earth's rotation.
4. Heat is transferred through the atmosphere by…………………….……
   a. convection. b. conduction. c. reflection. d. absorption.
5. When air is heated, its……………………….. changes.
   a. Mass b. smell c. color d. density

2. Put (√) or (×):-

1. Cold air has more density than hot air. ( )
2. By increasing the temperature of air, its density decreases. ( )
3. When the air is cooled, it rises up. ( )
4. Hot air rises above colder air. ( )
5. Transfer of heat by convection occurs in solids, liquids and gases. ( )

3. Choose from column (B) what suits it in column (A):-

(A)	(B)
1. Anemometer	a. Measuring the atmospheric pressure
2. Weather radar	b. Measuring the wind speed
3. Rain gauge	c. Measuring the intensity of precipitation
	d. Measuring the amount of rain

1. ………………	2. …………………	3. …………………

4. Give reason for:-

1. When air is heated, it expands.
   ………………………………………………………………………………………………………

5. What happen to……?

1. We boil water in a pot on the stove. (Concerning the movement of hot water and cold water)
   ………………………………………………………………………………………………………



Exam on lesson 4

1. Choose the correct answer:-

1. Extreme weather conditions include all the following, except……………………

   a. drought b. flooding. c. sandstorms. d. sunrise.

2. The increase in the amount of rain may cause……………

   a. flooding. b. drought. c. sandstorm. d. dust storm,

3. Drought affects all the following, except…………………………

   a. people. b. plants. c. buildings. d. animals.

4. If a driver's visibility range in sunny weather is up to 5 km, the visibility range may reach……………. in stormy weather.

   a. 1 Km or less b. 6 Km c. 8 Km d. 10 Km

2. Put (√) or (×):-

1. Heavy rain may cause drought. ( )
2. Although flooding is harmful, it also has some benefits. ( )
3. Sandstorms blow up from a dry area such as seas and oceans. ( )
4. Floods may cause death of people and animals. ( )
5. Dust storms have harmful effects on the plane engines. ( )

3. Write the scientific terms of each of the following:-

1. A phenomenon in which the condensed water vapor falls on the Earth's surface in the form of rain, snow, sleet or hail. (…………………..…………..)
2. A phenomenon in which very strong winds blow up dust that reduces the visibility during driving cars. (……………………..)

4. Give reason for:-

1. Floods have some benefits…………………………………………………………………………
2. Sandstorms have harmful effects on human health……………………………………………..

5. What happen to……?

1. Buildings when they are subjected to strong floods.
2. Solar panels when dust accumulates on them.

6. Classify the following extreme weather conditions in Ven diagram below using the sentences between brackets:-

(harmful to habitat – overflow of water – shortage of water – animals and humans are affected – the land becomes wet – the land becomes dry)

Too much

•……………
•……………

flood

both

•……………
•……………

Too little

•……………
•……………

drought

Affected by



Model Exam Concept 3.2

Choose the correct answer:-

1. The density of cold dry air is ……… that of hot humid air
   a. More than b. equal to c. less than d, similar to
2. Heat transfers from the ……………… object to the ………………object
   a. Big – small b. hot – cold c. small – big d. cold – hot
3. When air is heated, its ………………… changes
   a. Smell b. color c. density d. mass
4. Drought affects the following, except ……………………….
   a. Animals b. plants c. people d. buildings
5. If a driver's visibility range in sunny weather is up to 5 km, the visibility range may reach…………… in stormy weather.
   a. 1 Km or less b. 6 Km c. 8 Km d. 10 Km
6. Heat is transferred through the atmosphere by……………………….…….
   b. convection. b. conduction. c. reflection. d. absorption.

1. Choose from column (B) what suits it in column (A):-

(A)	(B)
1. Anemometer 2. Weather radar 3. Rain gauge	a. Measuring the atmospheric pressure b. Measuring the wind speed c. Measuring the intensity of precipitation d. Measuring the amount of rain

1. …………….	2. ……………….	3. ……………….

2. Put (√) or (×):-

1. When rain doesn't fall, soil may dry and plants may die ( )
2. By increasing the temperature of air, its density increases ( )
3. Sand cools down in a shorter time than sea water during nighttime ( )
4. The properties of the atmosphere at the top of the mountain and at its bottom are similar ( )

3. Write the scientific terms of each of the following:-

1. A side of mountains ranges of coastal regions that faces the coast (……………………)
2. A device used to measure atmospheric pressure (……………………)
3. It is the weight of the air above an area (………………………)
4. A phenomenon in which very strong winds blow up dust that reduce the visibility during driving cars (………………………)



4. Complete the following sentence:-

(flooding – drought – decrease – increase – dry- wet)

1. Extreme hot temperatures may causes ………………
2. Heavy rain may cause ………………
3. Sandstorms …………… the chances of car accidents
4. Dust storms …………………… the water quality in irrigation canal
5. Floods result in formation of ……………………… lands
6. Strong winds may blow up sand from a ………………… area such as deserts

5. Give reason for:-

1. Extreme weather became more danger in many places around the world

   ………

2. Formatting of fog in the early morning

   ………

6. What happen to……?

1. The atmospheric pressure, as we move up toward the top of a mountain

   ………

2. Air density, as we move down toward the bottom of a mountain

   ………

7. The following diagram shows the steps of rain shadow phenomenon, complete the following steps using the words below:-

(rises – descends – cools – warms – condenses)

humid air belows against a mountain

air (…….1……..), then it (……..2………)

air (……..3……..), then precipitation occures

air (……..4…….), then it (……..5……..)

air dries the land



Concept 4.1

Fxam on lesson 1

Choose the correct answer:-

1. Dorcas gazelle lives in………………………
   a. tropical area. b. desert area. c. north pole. d. south pole.
2. The adaptation that is related to the body structure of a living organism, is known as……
   a. structural adaptation. b. behavioral adaptation. c. homeland. d. stopover.
3. Birds migrate to search for all of the following, except……………………..
   a. best conditions for reproduction. c. different food resources.
   b. another suitable habitat. d. another unsuitable climate.
4. Photosynthesis process is affected by some environmental factors such as……………………..
   a. availability of water only. b. availability of light only.
   c. availability of water and light. d. the length of the plants.
5. The Red Sea in Egypt includes all of the following environments, except…… environment.
   a. marine b. mountain c. rain forest d. coastal

Choose from column (B) what suits it in column (A):-

(A)	(B)
1. Structural adaptation	a. Is an example of structural adaptation
2. Behavioral adaptation	b. Like growth of plant toward light
3. Bird migration	c. Is an ecosystem.
4. Thorns in a plant stem	d. Like thick fur of animals that live in cold areas
	e. Is an example of behavioral adaptation

1. ………………	2. ………………	3. ………………	4. ………………

Put (√) or (×):-

1. It is easy for animals to live in the desert environments. ( )
2. Animals migrate from one place to another seasonally. ( )
3. Birds migrate to areas that have no food or water. ( )
4. Dorcas gazelle can live in both desert area and semi-desert area. ( )
5. Migratory birds are affected by environmental factors during their migration. ( )

Write the scientific terms of each of the following:-

1. It is a type of behavioral adaptation in which animals move in a certain season from one place to another. (………………………………….)
2. An important stopover in Egypt for migratory birds, that includes marine, coastal and mountain environments. (……………………………….)
3. It is a change in the behaviors or acts of a living organism to help it survive. (…………………)

Give reason for:-

1. Falcons and eagles migrate to Egypt in winter

………

6.What happen to……?

1. The environmental conditions changes in the homeland in which some migratory birds live

………

Exam on lesson 2

1. Choose the correct answer:-

1. Each environment on planet Earth has specific……………………….
   a. climate only. b. plants only. c. animals only. d. climate, plants and animals.
2. Poison dart frog lives in………………………… environment.
   a. arctic b. Antarctic c. desert d. tropical rain forest
3. All the following are biotic factors, except……………………….
   a. animals. b. insects. c. precipitation. d. grasses.
4. Abiotic factors in an ecosystem include……………………………….
   a. animals and air. b. grasses and soil. c. living organisms. d. nonliving things.
5. Plants respond to the amount of……………….. they receive daily.
   a. light only b. dark only c. light and dark d. biotic factors

2.Put ( ) or (×):-

1. The skin of poison dart frog cannot protect it from predators. ( )
2. Ecosystem contains biotic factors and abiotic factors. ( )
3. Abiotic factors of an ecosystem can eat, breathe and grow. ( )
4. Biotic factors of an ecosystem include sunlight, air and water. ( )
5. Deserts may be hot areas or cold areas. ( )



6. Chrysanthemum plant can produce flowers when the nights are longer than days. ( )

3.Write the scientific terms of each of the following:-

1. The factors that include nonliving things in an ecosystem. (…………………………)
2. It is a desert biome that has a cold climate all the year. (…………………………)

4.Give reason for:-

1. African penguin has a circle of skin that doesn't have any feather around each of its eyes.

   ……………………………………………………………………………………………

2. Some plants in deserts produce seeds that can live for a long time

   ……………………………………………………………………………………………

5.What happen to……?

1. The plants in an ecosystem, if they receive too intense light.

   ……………………………………………………………………………………………..

6.Study the following picture then put ( ) or (×):-

(1) (2) (3) (4)

1. The four picture show some biotic and abiotic factors ( )
2. The four picture show some biotic factors that live in three different environment ( )
3. The animal in picture (2) live in an environment that suffers from shortage of water, while the environment in which the animal in picture (3) lives has a lot of water ( )
4. Animals in picture (2) and (4) can't live in the same environment, while living organisms in picture (1) and (3) can live in the same environment ( )
5. Caribou can live in the same environment in which the animal in picture (4) lives ( )



Exam on lesson 3

1. Choose the correct answer:-

1. All the following are inherited traits in humans, except………………………
   a. eye color. b. nose shape. c. fur color. d. ear shape.
2. Appearance of inherited traits on offspring, is due to passing down……from their parents
   a. environmental factors b. behaviors c. genetic factors d. leaves
3. Birman cats have………………………..
   a. very fine hair. b. long and silky hair. c. no hair. d. black feathers.
4. All the following are inherited traits in plants, except…………………
   a. leaves color. b. leaves shape. c. length of stem. d. length of ears.
5. Bad habits in humans lifestyle include…………………………..
   a. eating healthy food b. doing exercises c. drinking more soda d. avoid smoking.
6. Genes are tiny structures that found in……………………
   a. the cell nucleus b. the cell membrane c. the cell wall. d. mitochondria

2. Put (√) or (×):-

1. Inherited traits not affect the structure of living organisms. ( )
2. Sphynx cat doesn't have any hair or have only very fine hair. ( )
3. All birman cats have white, very short and silky hair. ( )
4. Inherited traits in sphynx cats include hairless body, eye color and ear shape. ( )
5. Your health will be positively affected, if you drink unclean water. ( )

3. Write the scientific terms of each of the following:-

1. It is the factor that controls which traits get inherited from parents to their offspring.
   (…………………………)
2. They are external factors that affect our health and we might not able to control them.
   (………………………………..…..)
3. They are responsible for determining the body feature, and present in the cell nucleus.
   (……………………………..)

4. Complete the following sentence:-

1. The types of cats that inherits its hairless body from its parents, is known as ………… cat
2. Sphynx cat doesn't have the genetic factors for ………………which is found in ………… cat
3. Colour and place of the flower are two inherited …………… in plant



4. Give reason for:-

1. Your lifestyle choices affect your health.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

5. What happen to……?

1. The inherited traits are transferred from desert plants to another through generations

……………………………………………………………………………………………………

Model Exam Concept 4.1

1. Choose the correct answer:-

1. Poison dart frog lives in …….. environment
   a. arctic b. Antarctic c. desert d. tropical rain forest
2. The red sea in Egypt includes all of the following environments except …………… environment
   a. marine b. mountain c. rain forest d. coastal
3. Genes are tiny structures that found in
   a. The cell nucleus b. the cell membrane c. the cell wall d. mitochondria
4. Acacia tree and arctic fox live in …………………
   a. desert environment b. arctic environment
   c. rain forest environment d. two different environments

2. Choose from column (B) what suits it in column (A):-

(A)	(B)
1. Acacia tree 2. Poison dart frog 3. Emperor penguin 4. Arctic fox	a. It has sandy-colored scales b. It has thick white fur c. It lives in Antarctic d. It lives in desert e. It lives in tropical rain forest

1. …………………	2. ……………………	3. ……………………	4. ……………………

Put ( ) or (×):-

1. Dorcas gazelle can live in both desert area and semidesert area ( )
2. Around each eye of emperor penguin, there is circle of skin that doesn't have any feathers ( )
3. Inherited traits in sphynx cats include hairless body, eye color and ear shape ( )



4. Migratory birds are affected by environmental factors during their migration ( )
5. Abiotic factors affect the growth and the adaptation of biotic factors ( )
6. All birman cars have white, very short and silky hair ( )
7. Availability of water is a genetic factor that affects the growth of trees and shrubs in an ecosystem ( )
8. The amount of light affects the growth of plants ( )

3. Write the scientific terms of each of the following:-

1. It is a type of behavioral adaptation in which animals move in a certain season from one place to another (……………………………)
2. It is a desert biome that has a cold climate all the year (………………………)
3. They are responsible for determining the body feature, and present in the cell nucleus. (……………………………..)

4. Complete the following sentence:-

1. All living organisms inherit ………………… factors which transferred from parents to their offspring
2. Thick fur is an example of structural adaptation for animals that live in ……………… climate
3. Some plants like palms and acacia trees live in the ………………… environment in Egypt
4. Sphynx cat doesn't have the genetic factor for ……………… which is found in …………… cat

5. Give reason for:-

1. Some plants which live in desert environment have short extended roots near the earth's surface

   ……………………………………………………………………………………………………

2. African penguin has a circle of skin that doesn't have any feather around each of its eyes

   ……………………………………………………………………………………………………

6. What happen to……?

1. Living organisms in an ecosystem, if water and light are not available

   ……………………………………………………………………………………………………
   …………………………………………………………
2. The environmental conditions changes in the homeland in which some migratory birds live

   ……………………………………………………………………………………………………
   …………………………………………………………

7. Look at the opposite figure, then complete the following sentence:-

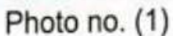


Photo no. (1)


Photo no. (2)


Photo no. (3)

A. Complete the following sentences:-

1. Photo number (………) and (………) represent bad habits
2. Photo number (………) represents a good habit

B. Put (√) or (×):-

1. Photo number (3) represents an environmental factor that positively affect human health ( )
2. Photo number (1) and (2) are related to genetic factors ( )
3. Photo number (2) and (3) are represent good lifestyle choices ( )
4. All photo show habits that have different effects on the human health ( )

Give the reason.

1- Desert farming faces many difficulties
   Because the desert's climate is hot, and the amount of water is small
2- Sometimes people prefer to live in desert land instead of cities
   Due to the fast population growth in cities
3- Hot air moves up while cold air moves down
   Because hot air has low density while cold air has high density
4- At noon, we may not be able to stand barefoot on the sand of a beach in summer, but we can swim in the sea water
   Because sand is heated up faster than water
5- When air is heated, it expands
   Because the molecules of air move away from each other
6- Extreme weather became more stronger in many places around the world
   Due to global climate change
7- Floods have some benefits
   Because some ecosystems depend on floods such as ecosystems along the Nile





8- Sandstorms have harmful effects on human health
Because they harm the human eyes and respiratory system

9- Small Dorcas gazelle is similar to its parents
Because they get some genetic factors from their parents

10- falcons and eagles migrate to Egypt in winter
because Egypt in winter has a moderate climate condition

11- birds migrate from one place to another place
to search for the best conditions that help them reproduce

12- African penguin has a circle of skin that does not have any feather around each of its eyes
To help its body cool fast in hot climate

13- Most of desert plants have short extended roots near the Earth's surface
To absorb any available water and to catch the smallest drops of dew

14- Some plants in deserts produce seeds that can live for a long time
Because in deserts there are shortage of rainfall for a long time

15- Poison dart frog has colorful poisonous skin
To protect itself from predators

16- Lizard body is covered with sandy colored scales
To hide among rocks in desert

17- Some plants which live in desert environment have long roots
To get the deep groundwater

18- A Birman kitten has long and silky hair
Because it inherits this trait from its parents

19- Sphynx cats does not have long hair
Because it does not have the genetic factor for long hair

20- Your lifestyle choices affect your health
Because it depends on your behavior which may be good habits or bad habits

What happens to/ if?

1- The atmosphere pressure, as we move up toward the top of a mountain
The atmosphere pressure decreases

2- Air density as we move down toward the bottom of the mountain
Air density will increase




3- The temperature of water inside a beaker if we put it under a lighted lamp for few minutes
The temperature of water will increase

4- The temperature of a desert sand at night
The temperature of a desert sand will decrease

5- We boil water in a pot on the stove (concerning the movement of hot water and cold water)
Hot water moves up and cold water falls down

6- Buildings when they are subjected to strong floods
They may be damaged by moving or breaking them

7- Solar panels when dust accumulates on them
Solar panels stop generating energy

8- If the environmental conditions change in the homeland in which some migratory birds live
They will migrate to another suitable habitat

9- To the living organisms in an ecosystem, if water and light are not available
Living organisms cannot survive and will die

10- To the plants in an ecosystem, if they receive too intense light
Plant parts may be damaged, dried or burned





11- To two similar plants, if they are exposed to the same intensity and duration of light
The two plants will grow with same rate

12- If the genetic factor of hairless body trait is transferred from sphynx cats parents to their offspring
The trait of hairless body appears on the offspring

13- If the inherited traits are transferred from desert plants to another through generations
The desert plants are more adapted to survive in extreme desert conditions